

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of:  Takai <i>et al.</i>  Patent. No.: 7,364,876  Issued: April 29, 2008  For: <b>ADIP Protein and Use Thereof</b>	Confirmation No.: 4948  Art Unit: 1646  Examiner: Basi, Nirmal Singh  Atty. Docket: 2144.0100000/RWE/BAH
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**Request for Certificate of Correction  
Under 37 C.F.R. § 1.322 and 1.323**

*Attn: Certificate of Correction Branch*

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

It is hereby requested that a Certificate of Correction under 37 C.F.R. §§ 1.322 and 1.323 be issued for the above-captioned United States Patent. This Certificate of Correction is being requested due to mistakes which appear in the printed patent. These mistakes were made by both the U.S. Patent and Trademark Office and by Applicants. The mistakes made by Applicants are of a clerical or typographical nature, or of a minor character. Patentees submit that correction of these errors does not introduce new matter.

Specifically, the printed patent contains the following errors for which a Certificate of Correction is respectfully requested:

Requested Change to Letters Patent	Location of Support in File History
In the specification at column 6, line 10, please delete "Functional" and insert therefor --Junctional--.	Original specification, at page 10, line 2. PTO's error.

Requested Change to Letters Patent	Location of Support in File History
In the specification at column 11, line 7, please delete "MADIP-M" and insert therefor --mADIP-M--.	Original specification at page 18, line 31. PTO's error.
In the specification at column 13, line 55, please delete "acids" and insert therefor --acid-; and delete "the an" and insert therefor --an--.	Original specification, at page 23, lines 25-26. Applicant's typographical error.
In the specification at column 14, line 57, please delete "Examples" and insert therefor --Example--.	Original specification, at page 25, line 21. Applicant's typographical error.
In the specification at column 18, line 3, please delete "ascites is" and insert therefor --ascites are--.	Original specification at page 31, lines 12- 13. Applicant's typographical error.
In the specification at column 19, line 15, please delete "myocarditis" and insert therefor --myocarditis--.	Original specification at page 33, line 14. Applicant's typographical error.
In the specification at column 19, line 63, please delete "myocarditis" and insert therefor --myocarditis--.	Original specification at page 34, line 23. Applicant's typographical error.
In the specification at column 20, line 52, please delete "DNAS" and insert therefor --DNAs--.	Original specification at page 36, line 5. PTO's error.
In the specification at column 25, line 34, please delete "nectin-2 $\alpha$ -AC-L cells" and insert therefor --nectin-2 $\alpha$ - $\Delta$ C-L cells--.	Original specification at page 44, line 6. PTO's error.
In the specification at column 26, line 43, please delete "MADIP" and insert therefor --mADIP--.	Original specification at page 46, line 2. PTO's error.
In the specification at column 28, line 50, please delete "MBP-MADIP" and insert therefor --MBP-mADIP--.	Original specification at page 49, line 18. PTO's error.
In the specification at column 30, line 16, please delete "j. Cell Biol." And insert therefor --J. Cell Biol.--.	Original specification at page 52, line 2. PTO's error.
In the specification at column 30, lines 34-35, please delete "nectin-2 $\alpha$ - $\alpha$ C-L cells" and insert therefor --nectin-2 $\alpha$ - $\Delta$ C-L cells--.	Original specification at page 52, lines 16-17. PTO's error.
In the specification at column 31, line 2, please delete "concentrated" and insert therefor --concentrate--.	Original specification at page 53, line 13. Applicant's typographical error.
In the specification at column 33, lines 41-42, please delete "2 mM Ca" and insert therefor --2 mM Ca $^{2+}$ --.	Original specification at page 57, lines 18-19. PTO's error.

<b>Requested Change to Letters Patent</b>	<b>Location of Support in File History</b>
In the specification at column 35 through column 54, please delete the sequence listing and insert the substitute sequence listing filed at the PTO on August 20, 2007.	Substitute Sequence Listing filed August 20, 2007. PTO's error.
In claim 3, at column 53, line 22, please delete "claim 1" and insert therefor --claim 2--.	Claim 23, line 2, of Amendment and Reply filed August 20, 2007. PTO's error.
In claim 4, at column 54, line 17, please delete "supernatant" and insert therefor --supernatant--.	Claim 5, line 4, of Amendment and Reply filed August 20, 2007. PTO's error.

***Remarks***

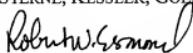
The above-noted corrections do not involve such changes in the patent as would constitute new matter or would require reexamination.

A completed Form PTO/SB/44 accompanies this request, with the above-noted corrections printed thereon. Accordingly, a Certificate of Correction is believed proper and issuance thereof is respectfully requested. These documents are filed electronically through EFS-Web.

This request is accompanied by payment of the fee set forth in 37 C.F.R. § 1.20(a). Fee payment is provided through online credit card payment. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Robert W. Esmond  
Attorney for Patentees  
Registration No. 32,893

Date: January 6, 2009

1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600

883833\_1.DOC

UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

Page 1 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

At column 6, line 10, delete "Functional" and insert therefor --Junctional--.

At column 11, line 7, delete "MADIP-M" and insert therefor --mADIP-M--.

At column 13, line 55, delete "acids" and insert therefor --acid-- and delete "the an" and insert therefor --an--.

At column 14, line 57, delete "Examples" and insert therefor --Example--.

At column 18, line 3, delete "ascites is" and insert therefor --ascites are--.

At column 19, line 15, delete "myocarditis" and insert therefor --myocarditis--; and line 63, delete "myocarditis" and insert therefor --myocarditis--.

At column 20, line 52, delete "DNAS" and insert therefor --DNAs--.

883944\_1.DOC

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Atty. Dkt. No. 2144.0100000/RWE/BAH

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Page 2 of 40

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INVENTOR(S): *Takai et al.*

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At column 25, line 34, delete "nectin-2 $\alpha$ -AC-L cells" and insert therefor --nectin-2 $\alpha$ - $\Delta$ C-L cells--.

At column 26, line 43, delete "MADIP" and insert therefor --mADIP--.

At column 28, line 50, delete "MBP-MADIP" and insert therefor --MBP-mADIP--.

At column 30, line 16, delete "j. Cell Biol." and insert therefor --J. Cell Biol.--; and

lines 34-35, delete "nectin-2 $\alpha$ - $\alpha$ C-L cells" and insert therefor --nectin-2 $\alpha$ - $\Delta$ C-L cells--.

At column 31, line 2, delete "concentrated" and insert therefor --concentrate--.

At column 33, lines 41-42, delete "2 mM Ca" and insert therefor --2 mM Ca<sup>2+</sup>--.

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DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

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At column 35 through column 54, please delete the sequence listing and insert therefor the following sequence listing:

SEQUENCE LISTING

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<110> EISAI CO., LTD.  
<120> ADIP PROTEIN AND USE THEREOF  
<130> 2144.0100000  
<140> US 10/644,084  
<141> 2003-08-20  
<150> JP 2002-284263  
<151> 2002-09-27  
<160> 9  
<170> PatentIn version 3.3
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Page 4 of 40

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DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

```
<210> 1
<211> 2692
<212> DNA
<213> Mus musculus
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<220>  
<221> CDS  
<222> (80)...(1927)  
<223> /note="afadin-and alpha-actinin-binding protein"

<400> 1

cctggctctg gaaccttgc atg ggg gat tgg atg act gtg aca gat cca gtt 112  
Met Gly Asp Trp Met Thr Val Thr Asp Pro Val  
1 5 10

ctg tgc aca gaa aac aaa aat ctc tct caa tat acc tca gaa aca aag	160
Leu Cys Thr Glu Asn Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys	
15 20 25	

atg tct ccg tcc agt ttg tac tcc cag caa gtt ctg tgc tct tca gta	208
Met Ser Pro Ser Ser Leu Tyr Ser Gln Gln Val Leu Cys Ser Ser Val	
30 35 40	

```

cct tta tcc aaa aac gtg cat ggt gtt ttc ggt gtc ttc tgc aca gga 256
Pro Leu Ser Lys Asn Val His Gly Val Phe Gly Val Phe Cys Thr Gly
        45           50           55

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gag aac att gaa caa agt att tcc tat ctt gat cag gag ctg acc acc	304
Glu Asn Ile Glu Gln Ser Ile Ser Tyr Leu Asp Gln Glu Leu Thr Thr	
60 65 70 75	
ttc ggg ttt cct tcc ttg tat gaa gaa tcc aaa agt aaa gag gca aag	352
Phe Gly Phe Pro Ser Leu Tyr Glu Glu Ser Lys Ser Lys Glu Ala Lys	
80 85 90	
aga gaa tta aat ata gtc gct gtt ctg aac tgt atg aac gag ctg ctc	400
Arg Glu Leu Asn Ile Val Ala Val Leu Asn Cys Met Asn Glu Leu Leu	
95 100 105	
gtg ctt cag cgg aag aac ctg ctg gcc cag gag agc gtg gag aca cag	448
Val Leu Gln Arg Lys Asn Leu Ala Gln Glu Ser Val Glu Thr Gln	
110 115 120	
aac ttg aag ctg ggc agt gac atg gac cac ctg cag agc tgc tac gcc	496
Asn Leu Lys Leu Gly Ser Asp Met Asp His Leu Gln Ser Cys Tyr Ala	
125 130 135	

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Page 6 of 40

PATENT NO: 7,364,876 B2

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INVENTOR(S): Takai *et al.*

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aaa ctt aag gag cag ttg gaa acg tcc agg cgg gag atg atc ggg ctt	544		
Lys Leu Lys Glu Gln Leu Glu Thr Ser Arg Arg Glu Met Ile Gly Leu			
140	145	150	155
caa gag aga gac agg cag ctg cag tgc aag aac agg agt ttg cat gag	592		
Gln Glu Arg Asp Arg Gln Leu Gln Cys Lys Asn Arg Ser Leu His Gln			
160	165	170	
ctc ctg aag aat gag aaa gat gag gta caa aaa tta caa aat atc ata	640		
Leu Leu Lys Asn Glu Lys Asp Glu Val Gln Lys Leu Gln Asn Ile Ile			
175	180	185	
gcc agc cgg gct act cag tat aat cat gat gtc aag agg aag gag cgt	688		
Ala Ser Arg Ala Thr Gln Tyr His Asp Val Lys Arg Lys Glu Arg			
190	195	200	
gaa tat aat aag cta aag gag cgc ctg cat cag ctc gtt atg aac aag	736		
Glu Tyr Asn Lys Leu Lys Glu Arg Leu His Gln Leu Val Met Asn Lys			
205	210	215	
aag gat aaa aac ata gcc atg gat gtt tta aat tat gtc ggt cga gct	784		
Lys Asp Lys Asn Ile Ala Met Asp Val Leu Asn Tyr Val Gly Arg Ala			
220	225	230	235

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PATENT NO: 7,364,876 B2

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gat ggc aaa cga ggc tca tgg agg act gac aaa aca gaa gcc agg aat	832
Asp Gly Lys Arg Gly Ser Trp Arg Thr Asp Lys Thr Glu Ala Arg Asn	
240 245 250	
gaa gat gag atg tac aaa att ctg ttg aat gat tat gag tac cgc cag	880
Glu Asp Glu Met Tyr Lys Ile Leu Leu Asn Asp Tyr Glu Tyr Arg Gln	
255 260 265	
aag cag atc ctg atg gag aac gcg gag ctg aag aag gtc ctc cag cag	928
Lys Gln Ile Leu Met Glu Asn Ala Glu Leu Lys Val Leu Gln Gln	
270 275 280	
atg aag aag gag atg atc tct ctc ctg tct cct cag aag aag aag ccc	976
Met Lys Lys Glu Met Ile Ser Leu Leu Ser Pro Gln Lys Lys Lys Pro	
285 290 295	
agg gaa aga gca gag gac ggc act gtt gct atc tcc gat ata	1024
Arg Glu Arg Ala Glu Asp Gly Thr Gly Thr Val Ala Ile Ser Asp Ile	
300 305 310 315	
gaa gat gac tct ggg gaa ctg agc aga gac agc gtg tgg ggc ctt tcc	1072
Glu Asp Asp Ser Gly Glu Leu Ser Arg Asp Ser Val Trp Gly Leu Ser	
320 325 330	

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tgt gac act gtg aga gag cag ctg aca aac agc atc agg aaa cag tgg	1120		
Cys Asp Thr Val Arg Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp			
335	340	345	
aga att ttg aaa agt cat gta gaa aaa ctc gat aac caa gct tcg aag	1168		
Arg Ile Leu Lys Ser His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys			
350	355	360	
gta cac tca gag ggc ctt aat gag gag gac gtc atc tca cga caa gac	1216		
Val His Ser Glu Gly Leu Asn Glu Glu Asp Val Ile Ser Arg Gln Asp			
365	370	375	
cat gag caa gag act gag aaa ctg gag ctg gag att gag cgg tgt aaa	1264		
His Glu Gln Glu Thr Glu Lys Leu Glu Leu Glu Arg Cys Lys			
380	385	390	395
gag atg atc aag gct cag cag cag ctc tta cag cag cag ctg gcc acc	1312		
Glu Met Ile Lys Ala Gln Gln Leu Leu Gln Gln Gln Leu Ala Thr			
400	405	410	
acg tgt gat gat gac acc acc tca ctg ttg cga gac tgt tac ttg ctg	1360		
Thr Cys Asp Asp Thr Ser Leu Leu Arg Asp Cys Tyr Leu Leu			
415	420	425	

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gaa gaa aag gaa cgc ctt aaa gaa gag tgg acc ctt ttt aaa gag caa	1408
Glu Glu Lys Glu Arg Leu Lys Glu Glu Trp Thr Leu Phe Lys Glu Gln	
430	440
aaa aag aat ttt gag aga gaa agg cga agc ttt aca gaa gct gcc att	1456
Lys Lys Asn Phe Glu Arg Glu Arg Arg Ser Phe Thr Glu Ala Ala Ile	
445	450
cga ttg ggg ttg gag aga aag gcg ttt gaa gaa gag cga gcc agc tgg	1504
Arg Leu Gly Leu Glu Arg Lys Ala Phe Glu Glu Glu Arg Ala Ser Trp	
460	465
470	475
gta aag cag cag ttt tta aac atg acg aac ttt gac cac cag aac tca	1552
Val Lys Gln Gln Phe Leu Asn Met Thr Asn Phe Asp His Gln Asn Ser	
480	485
490	
gaa aat gtg aaa ctt ttc agt gcc ttc tca gga agt tct gat cca gac	1600
Glu Asn Val Lys Leu Phe Ser Ala Phe Ser Gly Ser Ser Asp Pro Asp	
495	500
505	
aat ctt ata gtc cac tca cgg cca cgg caa aag aag cta cac agt gtg	1648
Asn Leu Ile Val His Ser Arg Pro Arg Gln Lys Lys Leu His Ser Val	
510	515
520	

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTIONPage 10 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

gct aat ggg gtg cca gct tgc aca tca aaa ctg act aaa tct ctt cct	1696
Ala Asn Gly Val Pro Ala Cys Thr Ser Lys Leu Thr Lys Ser Leu Pro	
525 530 535	
gcc tca cct tct act tca gac ttt cgc cag aca cat tca tgt gtg tct	1744
Ala Ser Pro Ser Thr Ser Asp Phe Arg Gln Thr His Ser Cys Val Ser	
540 545 550 555	
gaa cac agt tcc atc agt gtg ctg aat ata act cct gaa gaa agt aaa	1792
Glu His Ser Ser Ile Ser Val Leu Asn Ile Thr Pro Glu Glu Ser Lys	
560 565 570	
cca agt gag gtt gca aga gaa agc acg gat cag aag tgg agc gtg cag	1840
Pro Ser Glu Val Ala Arg Glu Ser Thr Asp Gln Lys Trp Ser Val Gln	
575 580 585	
tcg agg ccc agc tcg cgg gag ggg tgc tac agc gga tgc tcc tcg gcc	1888
Ser Arg Pro Ser Ser Arg Glu Gly Cys Tyr Ser Gly Cys Ser Ser Ala	
590 595 600	

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

Page 11 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

ttc agg agc gct cac ggg gac cga gat gac tta cct taa atgtgcgggc	1937
Phe Arg Ser Ala His Gly Asp Arg Asp Asp Leu Pro	
605 610 615	
tgca	
tgct	
tcgt	
tcgtc	
tcgtca	
tcgtcaact	
taagatgctc	
agagttgttt	
gtttggactt	
cgctgtcttc	
ccccaaagag	
ctgaaatgct	
aagctactta	
aaaggatgca	
aagctttgtt	
tgtgtgttag	
taacagaagc	
ccctggctct	
gtgactgcag	
aatgcatgg	
cgtttggatg	
gaaacagaag	
cgctggaaatg	
attgcctcgc	
caggta	
ccgc	
gaagagact	
tttagggact	
gttccctgt	
aacattaaat	
attcgtccca	
agtgtggtt	
gcattggaa	
tgtggcttt	
acttgaatgt	
atactgtaga	
tttttaacaa	
agcaggttct	
atatttatta	
tgttagtgt	
gattttggga	
ttacctcttt	
catatgtttt	
gtgtctgtac	
ataaatatac	
atgactatgt	
taagaggctt	
taaggtttaa	
aaacttcaca	
ccatgcttga	
gtatagcatt	
tcatgccaat	
taaaatgttt	
tcagtggcat	

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**

Page 12 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

ggtgtttaca gaggttagga ccactgccccatgacagttttaagccat 2537

ctgggcata aaaattcaaa gccccttcat aagctgagtt cagataactaa 2597

cgttacattt ttgagattt taaagcattt tattttttatatatgtg aatgttataa 2657

tttcttaagag gaatatttgat tatggatggaa tgggg 2692

<210> 2

<211> 615

<212> PRT

<213> Mus musculus

<400> 2

Met	Gly	Asp	Trp	Met	Thr	Val	Thr	Asp	Pro	Val	Leu	Cys	Thr	Glu	Asn
1				5				10					15		

Lys	Asn	Leu	Ser	Gln	Tyr	Thr	Ser	Glu	Thr	Lys	Met	Ser	Pro	Ser	Ser
20					25					30					

Leu	Tyr	Ser	Gln	Gln	Val	Leu	Cys	Ser	Ser	Val	Pro	Leu	Ser	Lys	Asn
35					40					45					

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**

Page 13 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Val His Gly Val Phe Gly Val Phe Cys Thr Gly Glu Asn Ile Glu Gln  
 50 55 60

Ser Ile Ser Tyr Leu Asp Gln Glu Leu Thr Thr Phe Gly Phe Pro Ser  
 65 70 75 80

Leu Tyr Glu Glu Ser Lys Ser Lys Glu Ala Lys Arg Glu Leu Asn Ile  
 85 90 95

Val Ala Val Leu Asn Cys Met Asn Glu Leu Leu Val Leu Gln Arg Lys  
 100 105 110

Asn Leu Leu Ala Gln Glu Ser Val Glu Thr Gln Asn Leu Lys Leu Gly  
 115 120 125

Ser Asp Met Asp His Leu Gln Ser Cys Tyr Ala Lys Leu Lys Glu Gln  
 130 135 140

Leu Glu Thr Ser Arg Arg Glu Met Ile Gly Leu Gln Glu Arg Asp Arg  
 145 150 155 160

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
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Page 14 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Gln Leu Gln Cys Lys Asn Arg Ser Leu His Gln Leu Leu Lys Asn Glu  
 165 170 175

Lys Asp Glu Val Gln Lys Leu Gln Asn Ile Ile Ala Ser Arg Ala Thr  
 180 185 190

Gln Tyr Asn His Asp Val Lys Arg Lys Glu Arg Glu Tyr Asn Lys Leu  
 195 200 205

Lys Glu Arg Leu His Gln Leu Val Met Asn Lys Lys Asp Lys Asn Ile  
 210 215 220

Ala Met Asp Val Leu Asn Tyr Val Gly Arg Ala Asp Gly Lys Arg Gly  
 225 230 235 240

Ser Trp Arg Thr Asp Lys Thr Glu Ala Arg Asn Glu Asp Glu Met Tyr  
 245 250 255

Lys Ile Leu Leu Asn Asp Tyr Glu Tyr Arg Gln Lys Gln Ile Leu Met  
 260 265 270

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTIONPage 15 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Glu Asn Ala Glu Leu Lys Lys Val Leu Gln Gln Met Lys Lys Glu Met  
275 280 285

Ile Ser Leu Leu Ser Pro Gln Lys Lys Lys Pro Arg Glu Arg Ala Glu  
290 295 300

Asp Gly Thr Gly Thr Val Ala Ile Ser Asp Ile Glu Asp Asp Ser Gly  
305 310 315 320

Glu Leu Ser Arg Asp Ser Val Trp Gly Leu Ser Cys Asp Thr Val Arg  
325 330 335

Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp Arg Ile Leu Lys Ser  
340 345 350

His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys Val His Ser Glu Gly  
355 360 365

Leu Asn Glu Glu Asp Val Ile Ser Arg Gln Asp His Glu Gln Glu Thr  
370 375 380

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Page 16 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Glu Lys Leu Glu Leu Glu Ile Glu Arg Cys Lys Glu Met Ile Lys Ala  
 385 390 395 400

Gln Gln Gln Leu Leu Gln Gln Leu Ala Thr Thr Cys Asp Asp Asp  
 405 410 415

Thr Thr Ser Leu Leu Arg Asp Cys Tyr Leu Leu Glu Glu Lys Glu Arg  
 420 425 430

Leu Lys Glu Glu Trp Thr Leu Phe Lys Glu Gln Lys Lys Asn Phe Glu  
 435 440 445

Arg Glu Arg Arg Ser Phe Thr Glu Ala Ala Ile Arg Leu Gly Leu Glu  
 450 455 460

Arg Lys Ala Phe Glu Glu Arg Ala Ser Trp Val Lys Gln Gln Phe  
 465 470 475 480

Leu Asn Met Thr Asn Phe Asp His Gln Asn Ser Glu Asn Val Lys Leu  
 485 490 495

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PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Phe Ser Ala Phe Ser Gly Ser Ser Asp Pro Asp Asn Leu Ile Val His  
500 505 510

Ser Arg Pro Arg Gln Lys Lys Leu His Ser Val Ala Asn Gly Val Pro  
515 520 525

Ala Cys Thr Ser Lys Leu Thr Lys Ser Leu Pro Ala Ser Pro Ser Thr  
530 535 540

Ser Asp Phe Arg Gln Thr His Ser Cys Val Ser Glu His Ser Ser Ile  
545 550 555 560

Ser Val Leu Asn Ile Thr Pro Glu Glu Ser Lys Pro Ser Glu Val Ala  
565 570 575

Arg Glu Ser Thr Asp Gln Lys Trp Ser Val Gln Ser Arg Pro Ser Ser  
580 585 590

Arg Glu Gly Cys Tyr Ser Gly Cys Ser Ser Ala Phe Arg Ser Ala His  
595 600 605

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Page 18 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Gly Asp Arg Asp Asp Leu Pro  
610 615

<210> 3  
<211> 3195  
<212> DNA  
<213> Rattus norvegicus

<220>  
<221> CDS  
<222> (79)...(1920)

<220>  
<221> misc\_feature  
<222> (2422)..(2422)  
<223> "n"=any one base of a, t, c, or g

<400> 3  
gttaggagagt gacaggagct gttgtgcgtat ccccagcaactgcccctt ctcagggacc 60

ctggctctgg gactggct atg gga gat tgg atg act gtt aca gat cca gtt 111  
Met Gly Asp Trp Met Thr Val Thr Asp Pro Val  
1 5 10

ctg tgt aca gaa aac aaa aat ctc tct caa tat acc tca gaa aca aag 159  
Leu Cys Thr Glu Asn Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys  
15 20 25

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PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

atg tct ccg tca agt tta tac tcc cag caa gta ctg tgc tct gca aca Met Ser Pro Ser Ser Leu Tyr Ser Gln Gln Val Leu Cys Ser Ala Thr 30 35 40	207
cct tta tcc aag aat gtg cat ggt gtt ttc agt gcc ttc tgc aca gga Pro Leu Ser Lys Asn Val His Gly Val Phe Ser Ala Phe Cys Thr Gly 45 50 55	255
gag aac atc gaa cag agt att tcg tat ctt gat cag gaa ctg act acc Glu Asn Ile Glu Gln Ser Ile Ser Tyr Leu Asp Gln Glu Leu Thr Thr 60 65 70 75	303
ttc ggt ttc cct tcc ttg tat gaa gaa tcc aaa agt aag gag ggc aag Phe Gly Phe Pro Ser Leu Tyr Glu Ser Lys Ser Lys Glu Ala Lys 80 85 90	351
cga gag tta agt ata gtt gct ctt ctg aac tgc atg aat gag ctg ctt Arg Glu Leu Ser Ile Val Ala Leu Asn Cys Met Asn Glu Leu Leu 95 100 105	399
gtg ctt cag cgg aag aac ctc ctg gcc cag gaa agc gtg gag aca cag Val Leu Gln Arg Lys Asn Leu Ala Gln Glu Ser Val Glu Thr Gln 110 115 120	447
aat ctg aag ctg ggc agt gac atg gac cac ctg cag agc tgc tac gcc Asn Leu Lys Leu Gly Ser Asp Met Asp His Leu Gln Ser Cys Tyr Ala 125 130 135	495

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PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

aaa ctt aag gaa cag ttg gag gcc tcc agg cga gag atg atc agc ctt	543
Lys Leu Lys Glu Gln Leu Glu Ala Ser Arg Arg Glu Met Ile Ser Leu	
140 145 150 155	
cag gag aga gac aga cag cta cag tgc aaa aac agg aat ttg cat gag	591
Gln Glu Arg Asp Arg Gln Leu Gln Cys Lys Asn Arg Asn Leu His Gln	
160 165 170	
ctc ctg aaa aac gag aaa gaa gag gta caa aaa tta caa aat atc ata	639
Leu Leu Lys Asn Glu Lys Glu Glu Val Gln Lys Leu Gln Asn Ile Ile	
175 180 185	
gcc agt cgg gct act cag tat aat cat gat gtg aag aga aag gag cgg	687
Ala Ser Arg Ala Thr Gln Tyr Asn His Asp Val Lys Arg Lys Glu Arg	
190 195 200	
gag tac aat aaa ctg aag gag cgt ctg cat cag ctt gtt atg aac aag	735
Glu Tyr Asn Lys Leu Lys Glu Arg Leu His Gln Leu Val Met Asn Lys	
205 210 215	
aag gat aaa aat ata gcc atg gac gtt tta aat tac gtg ggc cga gtg	783
Lys Asp Lys Asn Ile Ala Met Asp Val Leu Asn Tyr Val Gly Arg Val	
220 225 230 235	
gat gga aag cga ggc tcc tgg agg act gat aaa aca gaa gcc agg aat	831
Asp Gly Lys Arg Gly Ser Trp Arg Thr Asp Lys Thr Glu Ala Arg Asn	
240 245 250	

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTIONPage 21 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

gaa gat gaa atg tac aaa att ctg ctg aat gat tat gag tac cgc cag	879																																																		
Glu Asp Glu Met Tyr Lys Ile Leu Leu Asn Asp Tyr Glu Tyr Arg Gln																																																			
255	260	265		aag cag atc ctg ctg gag aat gcg gag ctg aag aag gtc ctc cag cag	927	Lys Gln Ile Leu Leu Glu Asn Ala Glu Leu Lys Val Leu Gln Gln		270	275	280		atg aag aaa gag atg atc tct ctc ctt tct cct caa aag aag aaa ccc	975	Met Lys Lys Glu Met Ile Ser Leu Leu Ser Pro Gln Lys Lys Lys Pro		285	290	295		aga gaa aga gca gag gac agc aca ggc act gtt gtc atc tcc gat gta	1023	Arg Glu Arg Ala Glu Asp Ser Thr Gly Thr Val Val Ile Ser Asp Val		300	305	310	315	gaa gac gac gct ggg gag ctg agc aga gat ggt gtg tgg agc ctt tcc	1071	Glu Asp Asp Ala Gly Glu Leu Ser Arg Asp Gly Val Trp Ser Leu Ser		320	325	330		tgt gac act gtc agg gag cag ctt aca aac agc atc agg aag cag tgg	1119	Cys Asp Thr Val Arg Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp		335	340	345		aga att ctg aaa agc cat gtg gaa aaa ctt gat aac caa gct tca aag	1167	Arg Ile Leu Lys Ser His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys		350	355	360	
265																																																			
aag cag atc ctg ctg gag aat gcg gag ctg aag aag gtc ctc cag cag	927																																																		
Lys Gln Ile Leu Leu Glu Asn Ala Glu Leu Lys Val Leu Gln Gln																																																			
270	275	280		atg aag aaa gag atg atc tct ctc ctt tct cct caa aag aag aaa ccc	975	Met Lys Lys Glu Met Ile Ser Leu Leu Ser Pro Gln Lys Lys Lys Pro		285	290	295		aga gaa aga gca gag gac agc aca ggc act gtt gtc atc tcc gat gta	1023	Arg Glu Arg Ala Glu Asp Ser Thr Gly Thr Val Val Ile Ser Asp Val		300	305	310	315	gaa gac gac gct ggg gag ctg agc aga gat ggt gtg tgg agc ctt tcc	1071	Glu Asp Asp Ala Gly Glu Leu Ser Arg Asp Gly Val Trp Ser Leu Ser		320	325	330		tgt gac act gtc agg gag cag ctt aca aac agc atc agg aag cag tgg	1119	Cys Asp Thr Val Arg Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp		335	340	345		aga att ctg aaa agc cat gtg gaa aaa ctt gat aac caa gct tca aag	1167	Arg Ile Leu Lys Ser His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys		350	355	360									
280																																																			
atg aag aaa gag atg atc tct ctc ctt tct cct caa aag aag aaa ccc	975																																																		
Met Lys Lys Glu Met Ile Ser Leu Leu Ser Pro Gln Lys Lys Lys Pro																																																			
285	290	295		aga gaa aga gca gag gac agc aca ggc act gtt gtc atc tcc gat gta	1023	Arg Glu Arg Ala Glu Asp Ser Thr Gly Thr Val Val Ile Ser Asp Val		300	305	310	315	gaa gac gac gct ggg gag ctg agc aga gat ggt gtg tgg agc ctt tcc	1071	Glu Asp Asp Ala Gly Glu Leu Ser Arg Asp Gly Val Trp Ser Leu Ser		320	325	330		tgt gac act gtc agg gag cag ctt aca aac agc atc agg aag cag tgg	1119	Cys Asp Thr Val Arg Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp		335	340	345		aga att ctg aaa agc cat gtg gaa aaa ctt gat aac caa gct tca aag	1167	Arg Ile Leu Lys Ser His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys		350	355	360																	
295																																																			
aga gaa aga gca gag gac agc aca ggc act gtt gtc atc tcc gat gta	1023																																																		
Arg Glu Arg Ala Glu Asp Ser Thr Gly Thr Val Val Ile Ser Asp Val																																																			
300	305	310	315	gaa gac gac gct ggg gag ctg agc aga gat ggt gtg tgg agc ctt tcc	1071	Glu Asp Asp Ala Gly Glu Leu Ser Arg Asp Gly Val Trp Ser Leu Ser		320	325	330		tgt gac act gtc agg gag cag ctt aca aac agc atc agg aag cag tgg	1119	Cys Asp Thr Val Arg Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp		335	340	345		aga att ctg aaa agc cat gtg gaa aaa ctt gat aac caa gct tca aag	1167	Arg Ile Leu Lys Ser His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys		350	355	360																									
310	315																																																		
gaa gac gac gct ggg gag ctg agc aga gat ggt gtg tgg agc ctt tcc	1071																																																		
Glu Asp Asp Ala Gly Glu Leu Ser Arg Asp Gly Val Trp Ser Leu Ser																																																			
320	325	330		tgt gac act gtc agg gag cag ctt aca aac agc atc agg aag cag tgg	1119	Cys Asp Thr Val Arg Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp		335	340	345		aga att ctg aaa agc cat gtg gaa aaa ctt gat aac caa gct tca aag	1167	Arg Ile Leu Lys Ser His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys		350	355	360																																	
330																																																			
tgt gac act gtc agg gag cag ctt aca aac agc atc agg aag cag tgg	1119																																																		
Cys Asp Thr Val Arg Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp																																																			
335	340	345		aga att ctg aaa agc cat gtg gaa aaa ctt gat aac caa gct tca aag	1167	Arg Ile Leu Lys Ser His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys		350	355	360																																									
345																																																			
aga att ctg aaa agc cat gtg gaa aaa ctt gat aac caa gct tca aag	1167																																																		
Arg Ile Leu Lys Ser His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys																																																			
350	355	360																																																	
360																																																			

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

Page 22 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

gta cac tca gag ggc ttt cat gaa gag gac gtc atc tca cga caa gac Val His Ser Glu Gly Phe His Glu Glu Asp Val Ile Ser Arg Gln Asp	1215
365 370 375	
cat gag caa gag act gag aaa ctg gag ctg gag att gag cgg tgt aaa His Glu Gln Glu Thr Glu Lys Leu Glu Leu Glu Ile Glu Arg Cys Lys	1263
380 385 390 395	
gag atg atc aag gct cag cag cag ctc tta cag caa cag ctg gcc act Glu Met Ile Lys Ala Gln Gln Gln Leu Leu Gln Gln Leu Ala Thr	1311
400 405 410	
gcg tgt gat gac gac acc acc tca ctg ttg cga gac tgt tac ttg ctt Ala Cys Asp Asp Asp Thr Thr Ser Leu Leu Arg Asp Cys Tyr Leu Leu	1359
415 420 425	
gaa gaa aag gaa cgc ctt aaa gaa gag tgg tcc ctt ttt aaa gag caa Glu Glu Lys Glu Arg Leu Lys Glu Glu Trp Ser Leu Phe Lys Glu Gln	1407
430 435 440	
aaa aag aat ttt gag aga gaa aga cga agc ttt aca gaa gct gct att Lys Lys Asn Phe Glu Arg Glu Arg Arg Ser Phe Thr Glu Ala Ala Ile	1455
445 450 455	
cgc ttg ggg ttg gag aga aag gcg ttt gag gaa gag cga gcc agc tgg Arg Leu Gly Leu Glu Arg Lys Ala Phe Glu Glu Glu Arg Ala Ser Trp	1503
460 465 470 475	

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
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Page 23 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

gtg aag cag cag ttt tta aac atg acg acc ttt gat cac cag aac tca	1551
Val Lys Gln Gln Phe Leu Asn Met Thr Thr Phe Asp His Gln Asn Ser	
480 485 490	
gaa aat gtg aaa ctt ttc agt gcc ttt tca gga agt tct gat cca gac	1599
Glu Asn Val Lys Leu Phe Ser Ala Phe Ser Gly Ser Ser Asp Pro Asp	
495 500 505	
aat ctt ata gtc cac cca cgg cca cgg caa aag aag cca cac agt gtc	1647
Asn Leu Ile Val His Pro Arg Pro Arg Gln Lys Pro His Ser Val	
510 515 520	
gct aat ggg gtg cca gct tgc aca tcc aaa ctg gct aag tct ctt ccg	1695
Ala Asn Gly Val Pro Ala Cys Thr Ser Lys Leu Ala Lys Ser Leu Pro	
525 530 535	
acc tca cct tca gac ttc tgc ccg tct cgc tca tgt gtg tct gag cac	1743
Thr Ser Pro Ser Asp Phe Cys Pro Ser Arg Ser Cys Val Ser Glu His	
540 545 550 555	
agt ccc gtc agt gcg ctg act gtg act cct gaa gaa acc aaa ccg aat	1791
Ser Pro Val Ser Ala Leu Thr Val Thr Pro Glu Glu Thr Lys Pro Asn	
560 565 570	
gag gtt gga aga gaa agt acg gac cag aag tgg agc gtg gtg tcc aga	1839
Glu Val Gly Arg Glu Ser Thr Asp Gln Lys Trp Ser Val Val Ser Arg	
575 580 585	

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Page 24 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

ccc agc tcc cgg gag ggt tgc tac ggt gga tgc tcc tcg gcc tac aca	1887
Pro Ser Ser Arg Glu Gly Cys Tyr Gly Cys Ser Ser Ala Tyr Thr	
590 595 600	
agc tcc cac gtg gaa cga gat gac tta cca tag gtgtctggc tgcagcgctg	1940
Ser Ser His Val Glu Arg Asp Asp Leu Pro	
605 610	
tcctggagt catgagagga attgacacgg ggtgttagcat aaagtcagcc atctaccgt	2000
agatgtcgg a gttatgtt tggacttccc agtcttccc caaagagctg aaacgcttta	2060
gaggatgcga a agctttggc tggatgttag taacagaagc cttcggtct gtgatggaa	2120
gaatgtatgg tggatgttaggg gaaacaaaag cacgagaatg atttcccttt cccgggtactg	2180
agaatagcac tttagggac tgattcttggtaa aacattaaa tttttgtccc aagtatggtt	2240
gcatttggaa gtttagtctt tacttggatg tacactgttag atttttttaaca aagcagtct	2300
atattttttaa tggatgttagt gatggatggaa ttacctttt catatgtttt ctgcctgtac	2360
ataaaatatac atgactatgt taagaggctt taaggtttaa aaatttcaca ccatgctcga	2420
gnatagcatt tcatgccaat taaaatgtt tcaatgtggcat ggtgtttaca gatgtgttag	2480

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PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

gaccactgcc acatgacagt taagattta ttttaagcc atttggcaa taaaaattca	2540
aagccatcc ataagctaag ttcatatgc taaaactact aacattacat tttttagatt	2600
tataaagcat tatattttat ttatataatg tgactgttat aatttctaag aggaatgtgg	2660
attatgaagc aatggggaa agacagaagt gactaatagt gcaagagcat tgggtgaagg	2720
gacggctgtat gaggatatgg gagacctggg tggtgatctt ttcccttaccg acgggtgcgg	2780
gccccatct ctgtaccgcc agggcttct atcattgccat atactttgt aattaaagag	2840
attttcaact acataccact actaaagtaa gacagtgtaa aactttggct tttgtatgg	2900
acactctggc cacttggatgt tggttcattt cttagaaat cgtaggctct ttctctgtt	2960
tctgtcat gtttcttcat gagaagtatg ttactattga cagtaatgac actgacagt	3020
actgttagacg taggccccaga cttdccctgg gtggatttc atccagacgc tttaagtgc	3080
ctcgccctgc tcgtctctgc acatagccgc cgacacaagc cctcgcttg aatgtgcagat	3140
agtccatctg ctttctctc cccttgcct gctatgactg ttgcattaaa ttcat	3195

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CERTIFICATE OF CORRECTIONPage 26 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

<210> 4  
<211> 613  
<212> PRT  
<213> Rattus norvegicus

<400> 4

Met Gly Asp Trp Met Thr Val Thr Asp Pro Val Leu Cys Thr Glu Asn  
1 5 10 15

Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys Met Ser Pro Ser Ser  
20 25 30

Leu Tyr Ser Gln Gln Val Leu Cys Ser Ala Thr Pro Leu Ser Lys Asn  
35 40 45

Val His Gly Val Phe Ser Ala Phe Cys Thr Gly Glu Asn Ile Glu Gln  
50 55 60

Ser Ile Ser Tyr Leu Asp Gln Glu Leu Thr Thr Phe Gly Phe Pro Ser  
65 70 75 80

Leu Tyr Glu Glu Ser Lys Ser Lys Glu Ala Lys Arg Glu Leu Ser Ile  
85 90 95

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
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Page 27 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Val Ala Leu Leu Asn Cys Met Asn Glu Leu Leu Val Leu Gln Arg Lys  
 100 105 110

Asn Leu Leu Ala Gln Glu Ser Val Glu Thr Gln Asn Leu Lys Leu Gly  
 115 120 125

Ser Asp Met Asp His Leu Gln Ser Cys Tyr Ala Lys Leu Lys Glu Gln  
 130 135 140

Leu Glu Ala Ser Arg Arg Glu Met Ile Ser Leu Gln Glu Arg Asp Arg  
 145 150 155 160

Gln Leu Gln Cys Lys Asn Arg Asn Leu His Gln Leu Leu Lys Asn Glu  
 165 170 175

Lys Glu Glu Val Gln Lys Leu Gln Asn Ile Ile Ala Ser Arg Ala Thr  
 180 185 190

Gln Tyr Asn His Asp Val Lys Arg Lys Glu Arg Glu Tyr Asn Lys Leu  
 195 200 205

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTIONPage 28 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Lys Glu Arg Leu His Gln Leu Val Met Asn Lys Lys Asp Lys Asn Ile  
210 215 220

Ala Met Asp Val Leu Asn Tyr Val Gly Arg Val Asp Gly Lys Arg Gly  
225 230 235 240

Ser Trp Arg Thr Asp Lys Thr Glu Ala Arg Asn Glu Asp Glu Met Tyr  
245 250 255

Lys Ile Leu Leu Asn Asp Tyr Glu Tyr Arg Gln Lys Gln Ile Leu Leu  
260 265 270

Glu Asn Ala Glu Leu Lys Val Leu Gln Gln Met Lys Lys Glu Met  
275 280 285

Ile Ser Leu Leu Ser Pro Gln Lys Lys Pro Arg Glu Arg Ala Glu  
290 295 300

Asp Ser Thr Gly Thr Val Val Ile Ser Asp Val Glu Asp Asp Ala Gly  
305 310 315 320

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PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Glu Leu Ser Arg Asp Gly Val Trp Ser Leu Ser Cys Asp Thr Val Arg  
325 330 335

Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp Arg Ile Leu Lys Ser  
340 345 350

His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys Val His Ser Glu Gly  
355 360 365

Phe His Glu Glu Asp Val Ile Ser Arg Gln Asp His Glu Gln Glu Thr  
370 375 380

Glu Lys Leu Glu Leu Glu Ile Glu Arg Cys Lys Glu Met Ile Lys Ala  
385 390 395 400

Gln Gln Gln Leu Leu Gln Gln Leu Ala Thr Ala Cys Asp Asp Asp  
405 410 415

Thr Thr Ser Leu Leu Arg Asp Cys Tyr Leu Leu Glu Glu Lys Glu Arg  
420 425 430

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If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**

Page 30 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Leu Lys Glu Glu Trp Ser Ieu Phe Lys Glu Gln Lys Lys Asn Phe Glu  
 435 440 445

Arg Glu Arg Arg Ser Phe Thr Glu Ala Ala Ile Arg Leu Gly Leu Glu  
 450 455 460

Arg Lys Ala Phe Glu Glu Glu Arg Ala Ser Trp Val Lys Gln Gln Phe  
 465 470 475 480

Leu Asn Met Thr Thr Phe Asp His Gln Asn Ser Glu Asn Val Lys Leu  
 485 490 495

Phe Ser Ala Phe Ser Gly Ser Ser Asp Pro Asp Asn Leu Ile Val His  
 500 505 510

Pro Arg Pro Arg Gln Lys Pro His Ser Val Ala Asn Gly Val Pro  
 515 520 525

Ala Cys Thr Ser Lys Leu Ala Lys Ser Leu Pro Thr Ser Pro Ser Asp  
 530 535 540

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTIONPage 31 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Phe Cys Pro Ser Arg Ser Cys Val Ser Glu His Ser Pro Val Ser Ala  
545 550 555 560

Leu Thr Val Thr Pro Glu Glu Thr Lys Pro Asn Glu Val Gly Arg Glu  
565 570 575

Ser Thr Asp Gln Lys Trp Ser Val Val Ser Arg Pro Ser Ser Arg Glu  
580 585 590

Gly Cys Tyr Gly Cys Ser Ser Ala Tyr Thr Ser Ser His Val Glu  
595 600 605

Arg Asp Asp Leu Pro  
610

<210> 5  
<211> 22  
<212> DNA  
<213> Artificial Sequence

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTIONPage 32 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

<220>  
<223> an artificially synthesized primer sequence

<400> 5  
cgttaggagag tgacaggaggc tg 22

<210> 6  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> an artificially synthesized primer sequence

<400> 6  
ggttatcgag ttttctaca tgac 24

<210> 7  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> an artificially synthesized primer sequence

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**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**Page 33 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

<400> 7	
cgttaggagag tgacaggaggc tg	22
<210> 8	
<211> 23	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> an artificially synthesized primer sequence	
<400> 8	
ttccctgtttt tgcactgtag ctg	23
<210> 9	
<211> 626	
<212> PRT	
<213> Homo sapiens	

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
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Page 34 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

<400> 9

Thr	Ser	Ser	Ser	Gly	Ile	Leu	Ala	Leu	Glu	Ile	Ala	Met	Gly	Asp	Trp
1				5				10					15		

Met	Thr	Val	Thr	Asp	Pro	Gly	Leu	Ser	Ser	Glu	Ser	Lys	Thr	Ile	Ser
	20						25					30			

Gln	Tyr	Thr	Ser	Glu	Thr	Lys	Met	Ser	Pro	Ser	Ser	Leu	Tyr	Ser	Gln
35						40						45			

Gln	Val	Leu	Cys	Ser	Ser	Ile	Pro	Leu	Ser	Lys	Asn	Val	His	Ser	Phe
50						55					60				

Phe	Ser	Ala	Phe	Cys	Thr	Glu	Asp	Asn	Ile	Glu	Gln	Ser	Ile	Ser	Tyr
65					70					75			80		

Leu	Asp	Gln	Glu	Leu	Thr	Thr	Phe	Gly	Phe	Pro	Ser	Leu	Tyr	Glu	Glu
						85			90			95			

Ser	Lys	Gly	Lys	Glu	Thr	Lys	Arg	Glu	Leu	Asn	Ile	Val	Ala	Val	Leu
						100			105			110			

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTIONPage 35 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Asn Cys Met Asn Glu Leu Ieu Val Leu Gln Arg Lys Asn Leu Leu Ala  
115 120 125

Gln Glu Asn Val Glu Thr Gln Asn Leu Lys Leu Gly Ser Asp Met Asp  
130 135 140

His Leu Gln Ser Cys Tyr Ser Lys Leu Lys Glu Gln Leu Glu Thr Ser  
145 150 155 160

Arg Arg Glu Met Ile Gly Leu Gln Glu Arg Asp Arg Gln Leu Gln Cys  
165 170 175

Lys Asn Arg Asn Leu His Gln Leu Leu Lys Asn Glu Lys Asp Glu Val  
180 185 190

Gln Lys Leu Gln Asn Ile Ile Ala Ser Arg Ala Thr Gln Tyr Asn His  
195 200 205

Asp Met Lys Arg Lys Glu Arg Glu Tyr Asn Lys Leu Lys Glu Arg Leu  
210 215 220

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Page 36 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

His Gln Leu Val Met Asn Lys Lys Asp Lys Lys Ile Ala Met Asp Ile  
 225 230 235 240

Leu Asn Tyr Val Gly Arg Ala Asp Gly Lys Arg Gly Ser Trp Arg Thr  
 245 250 255

Gly Lys Thr Glu Ala Arg Asn Glu Asp Glu Met Tyr Lys Ile Leu Leu  
 260 265 270

Asn Asp Tyr Glu Tyr Arg Gln Lys Gln Ile Leu Met Glu Asn Ala Glu  
 275 280 285

Leu Lys Lys Val Leu Gln Gln Met Lys Lys Glu Met Ile Ser Leu Leu  
 290 295 300

Ser Pro Gln Lys Lys Pro Arg Glu Arg Val Asp Asp Ser Thr Gly  
 305 310 315 320

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTIONPage 37 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Thr Val Ile Ser Asp Val Glu Glu Asp Ala Gly Glu Leu Ser Arg Glu  
325 330 335

Ser Met Trp Asp Leu Ser Cys Glu Thr Val Arg Glu Gln Leu Thr Asn  
340 345 350

Ser Ile Arg Lys Gln Trp Arg Ile Leu Lys Ser His Val Glu Lys Leu  
355 360 365

Asp Asn Gln Val Ser Lys Val His Leu Glu Gly Phe Asn Asp Glu Asp  
370 375 380

Val Ile Ser Arg Gln Asp His Glu Gln Glu Thr Glu Lys Leu Glu Leu  
385 390 395 400

Glu Ile Gln Gln Cys Lys Glu Met Ile Lys Thr Gln Gln Gln Leu Leu  
405 410 415

Gln Gln Gln Leu Ala Thr Ala Tyr Asp Asp Asp Thr Thr Ser Leu Leu  
420 425 430

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Page 38 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Arg Asp Cys Tyr Leu Leu Glu Glu Lys Glu Arg Leu Lys Glu Glu Trp  
 435 440 445

Ser Leu Phe Lys Glu Gln Lys Lys Asn Phe Glu Arg Glu Arg Arg Ser  
 450 455 460

Phe Thr Glu Ala Ala Ile Arg Leu Gly Leu Glu Arg Lys Ala Phe Glu  
 465 470 475 480

Glu Glu Arg Ala Ser Trp Leu Lys Gln Gln Phe Leu Asn Met Thr Thr  
 485 490 495

Phe Asp His Gln Asn Ser Glu Asn Val Lys Leu Phe Ser Ala Phe Ser  
 500 505 510

Gly Ser Ser Asp Trp Asp Asn Leu Ile Val His Ser Arg Gln Pro Gln  
 515 520 525

Lys Lys Pro His Ser Val Ser Asn Gly Ser Pro Val Cys Met Ser Lys  
 530 535 540

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTIONPage 39 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): Takai *et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

Leu Thr Lys Ser Leu Pro Ala Ser Pro Ser Thr Ser Asp Phe Cys Gln  
545 550 555 560

Thr Arg Ser Cys Ile Ser Glu His Ser Ser Ile Asn Val Leu Asn Ile  
565 570 575

Thr Ala Glu Glu Ile Lys Pro Asn Gln Val Gly Glu Cys Thr Asn  
580 585 590

Gln Lys Trp Ser Val Ala Ser Arg Pro Gly Ser Gln Glu Gly Cys Tyr  
595 600 605

Ser Gly Cys Ser Leu Ser Tyr Thr Asn Ser His Val Glu Lys Asp Asp  
610 615 620

Leu Pro  
625

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

Page 40 of 40

PATENT NO: 7,364,876 B2

DATED: April 29, 2008

INVENTOR(S): *Takai et al.*

It is certified that error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below.

In claim 3, at column 53, line 22, please delete "claim 1" and insert therefor --claim 2--.

In claim 4, at column 54, line 17, please delete "supematant" and insert therefor --supernatant--.

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